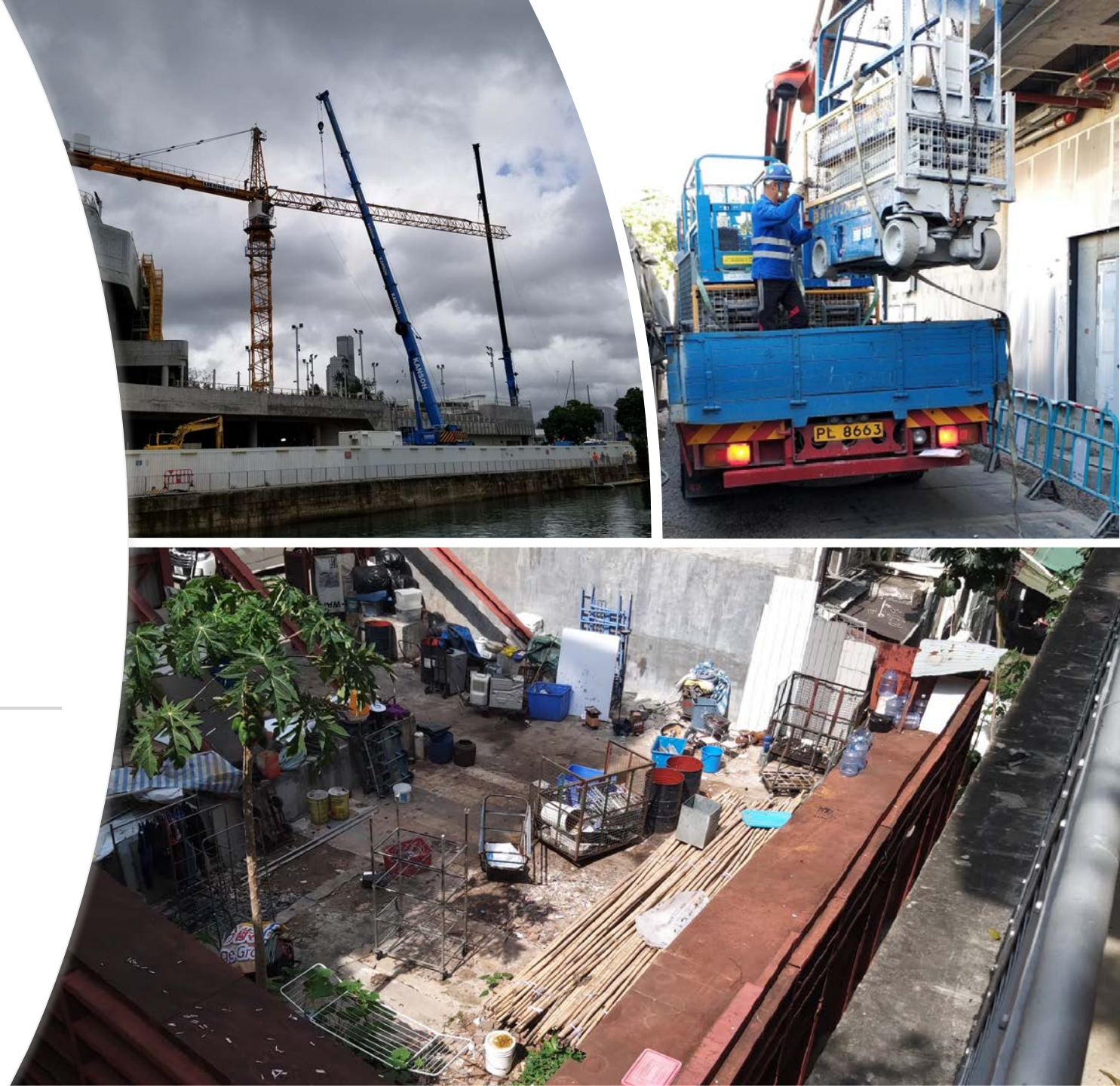


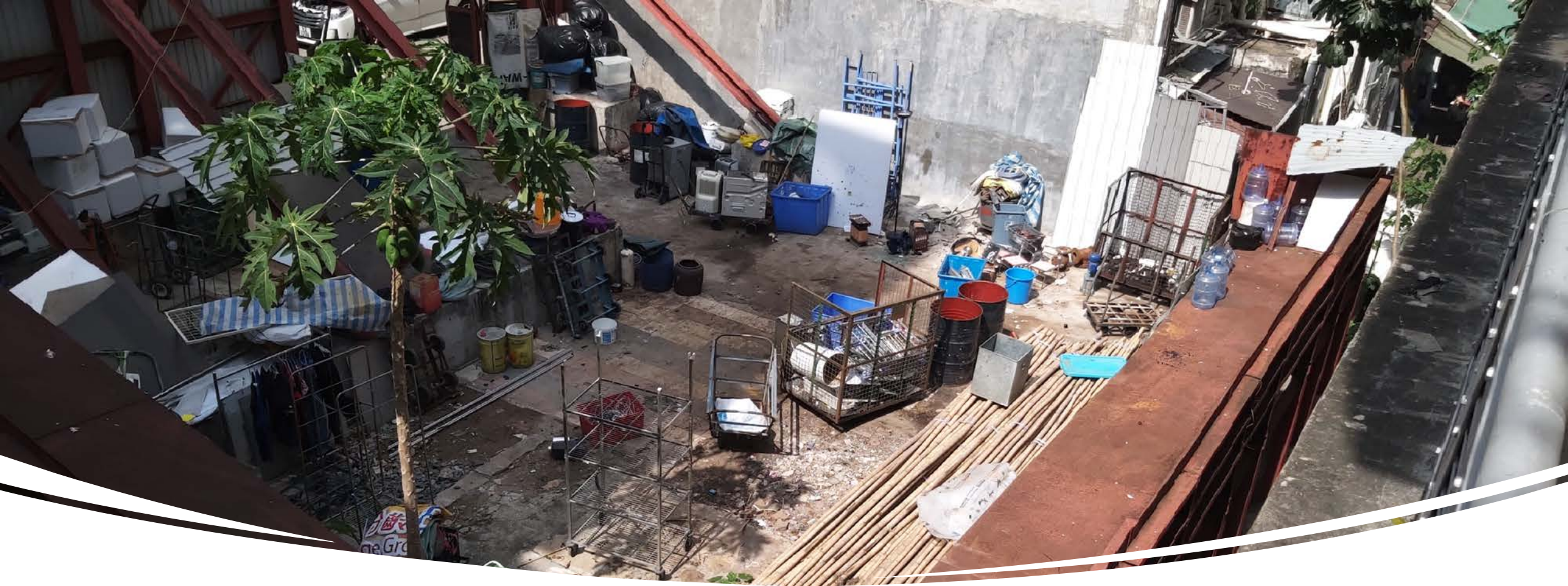
Safety Measures on Lifting Operation and Heavy Machinery

Presented by: Tommy Chan
Capital Works Business Unit



From management of
critical lift to everyday
ordinary lift and a story

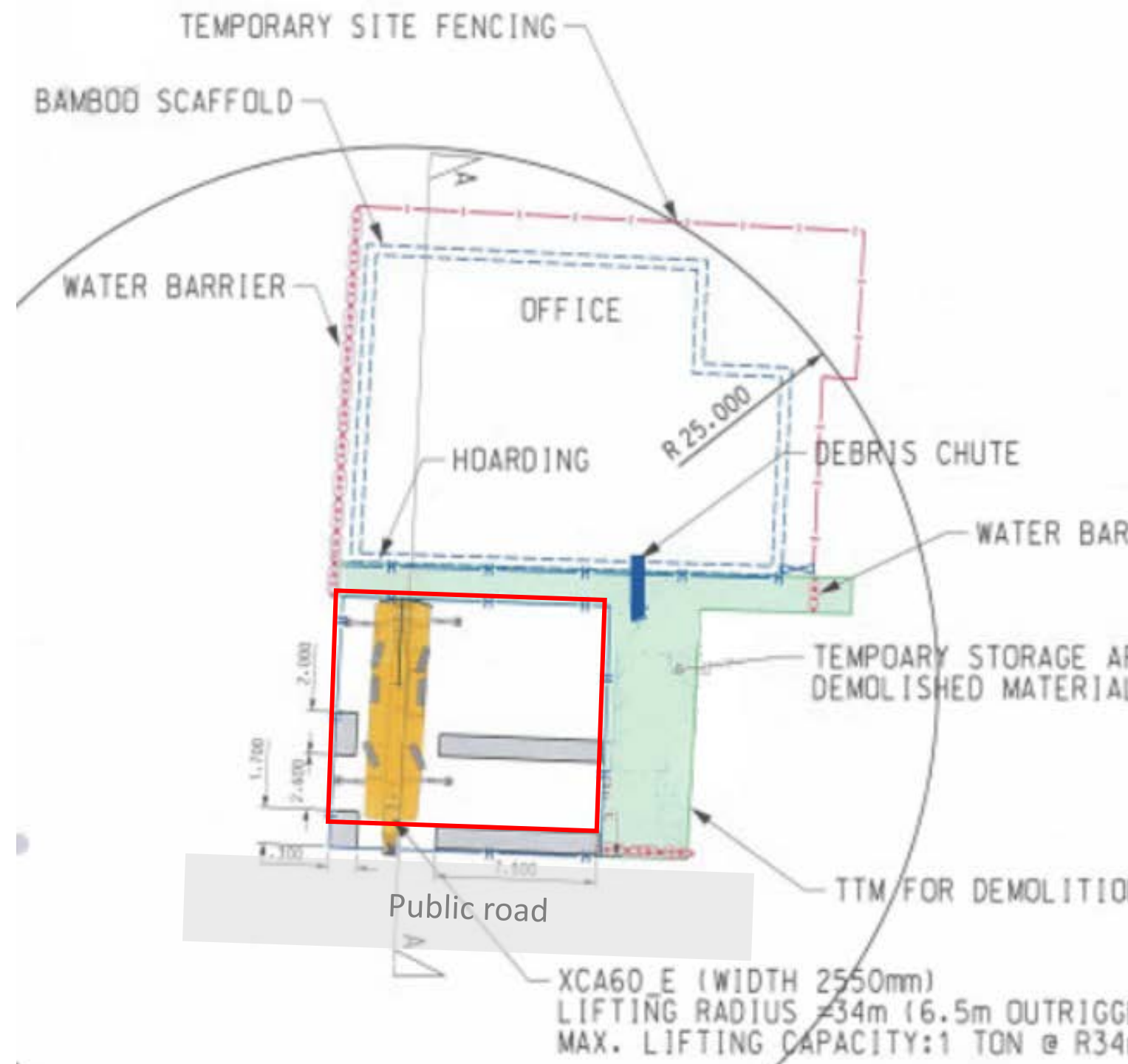




Site constraint

- Limited access from proximity private recycling yard, where an old building was demolished

The plan showing
the set up
arrangement

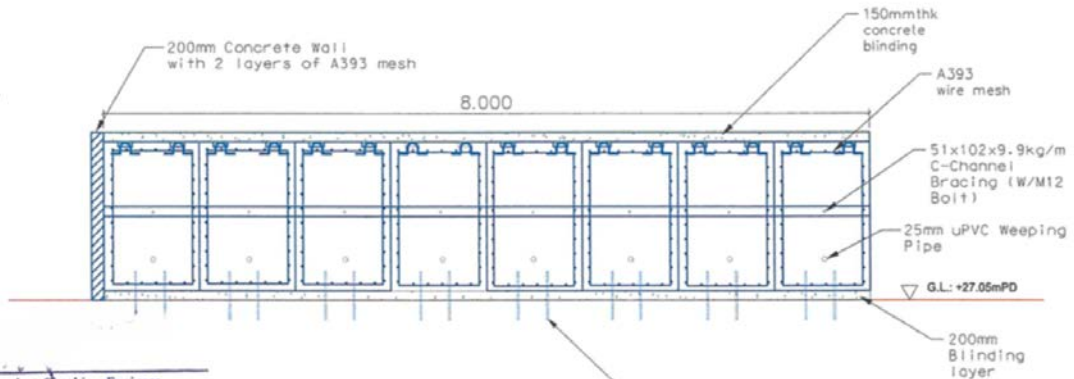
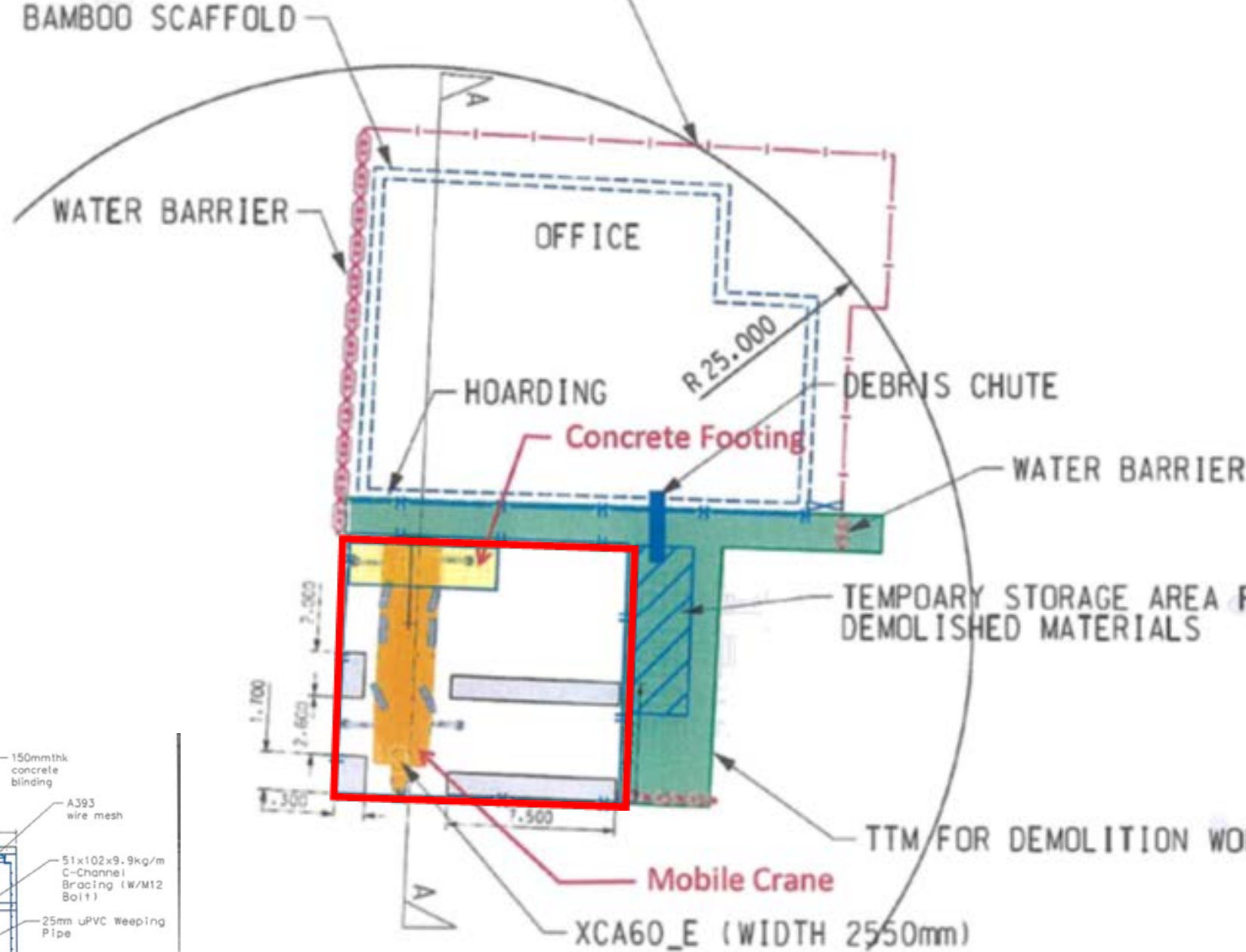


Ground condition was poor upon investigation

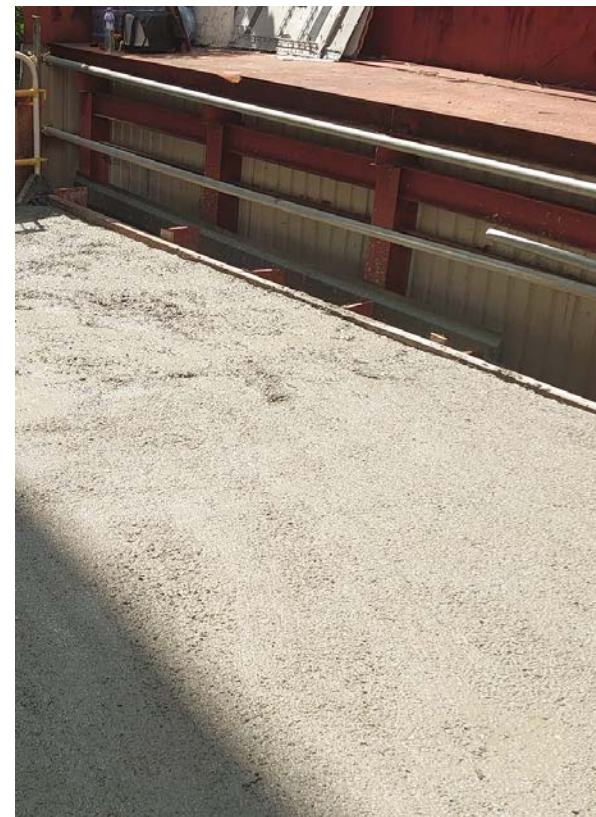
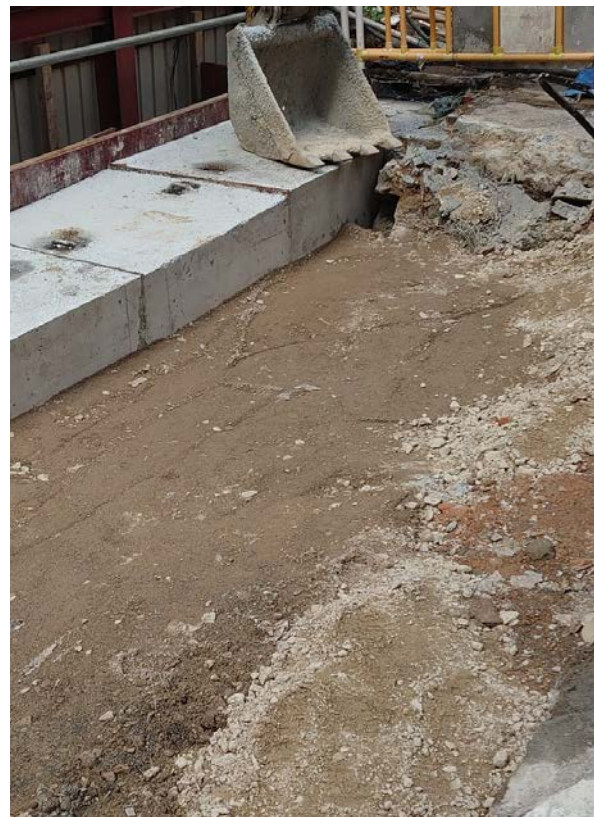
The foundation was filled with debris



Enhancement of crane platform by concrete blocks



Additional 16mm rebar anchor is to prevent concrete blocks sliding, no checking is required for the anchors.



Construction of concrete blocks

Permit to Load issued by ICE/TWC

- ... constructed in accordance with the design...

DESIGN AND CONSTRUCTION OF TEMPORARY WORKS

Construction Certificate No. ICE-CC-001

Contract No. _____

Contract Title: _____

Independent Checking Certificate of Temporary Works

Description of Temporary Works

Title: Mobile Crane Platform Enhancement Work

(20 ton Mobile Crane)

We certify that the Temporary Works described above have been constructed in accordance with the certified design of the Temporary Works (Design Certificate No. ICE-DC-001) ~~and in accordance with the method statement for erection, use, and removal of the Temporary Works (Design Certificate No.)~~.

Date 12/7/2021

Signed [Signature]
(name) for and on behalf of

[Signature]
(name of the Contractor)

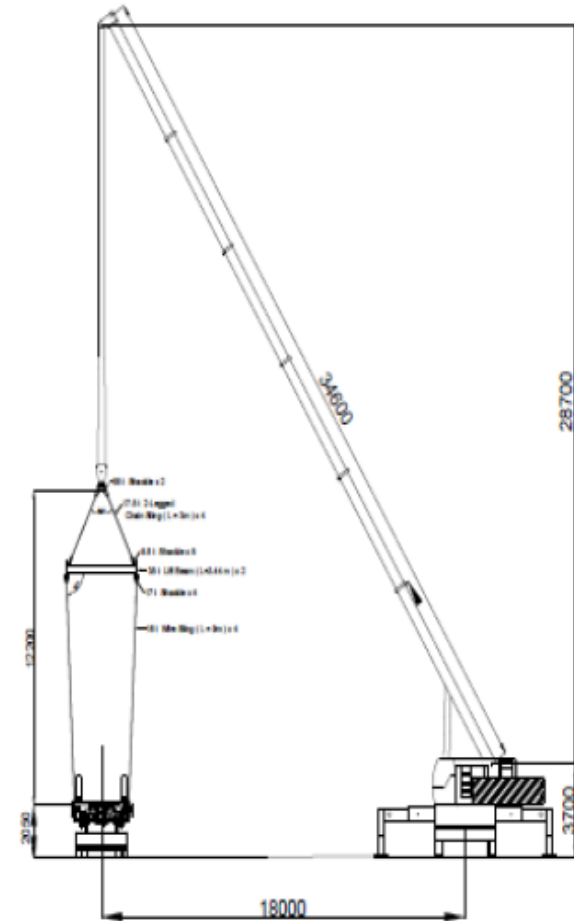
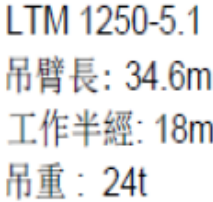
Date 12/7/2021

Signed [Signature]
Independent Checking Engineer
CEng., MStructE, MHKIE, RPE

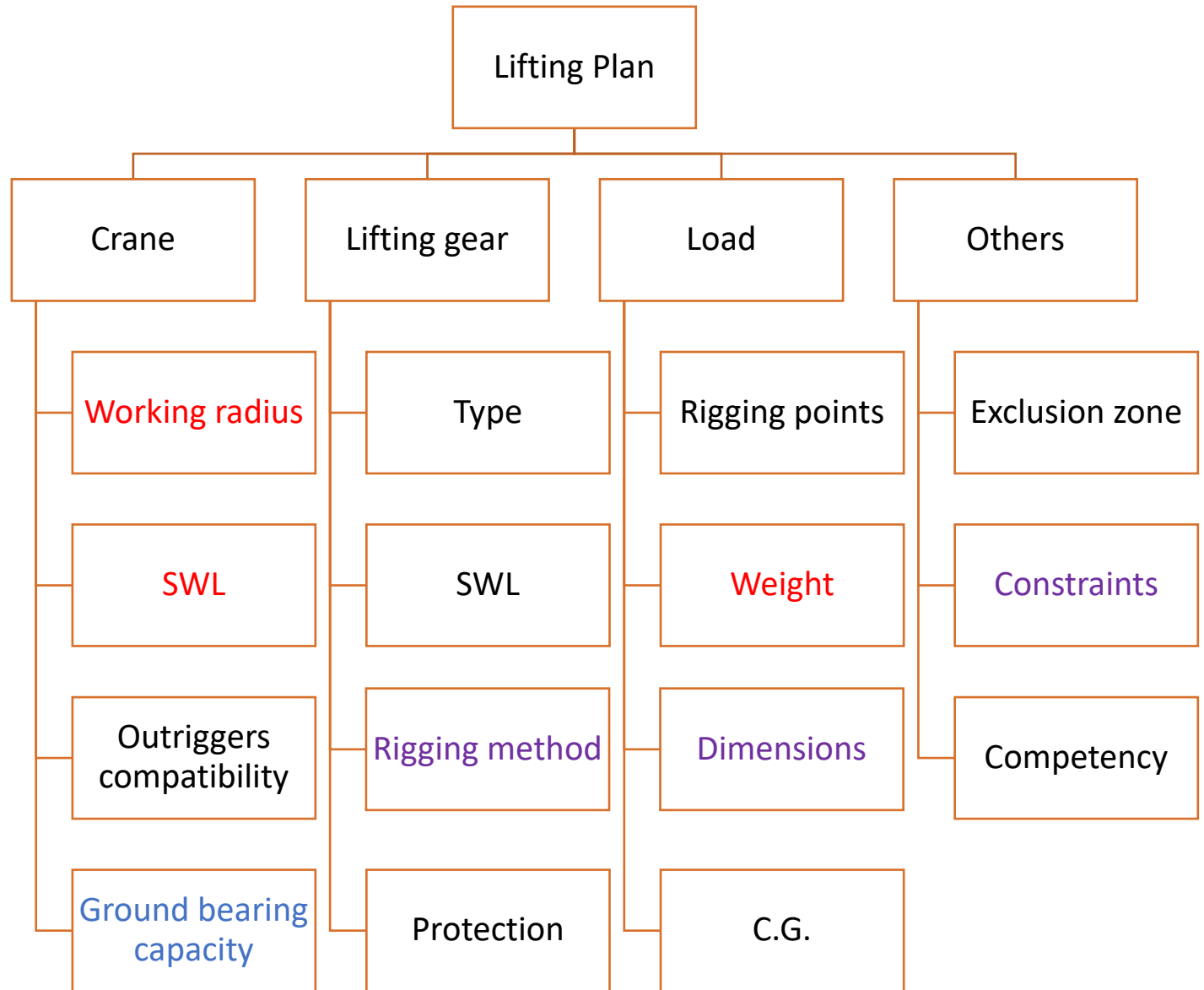
+ Person signing shall be duly authorised by the Contractor



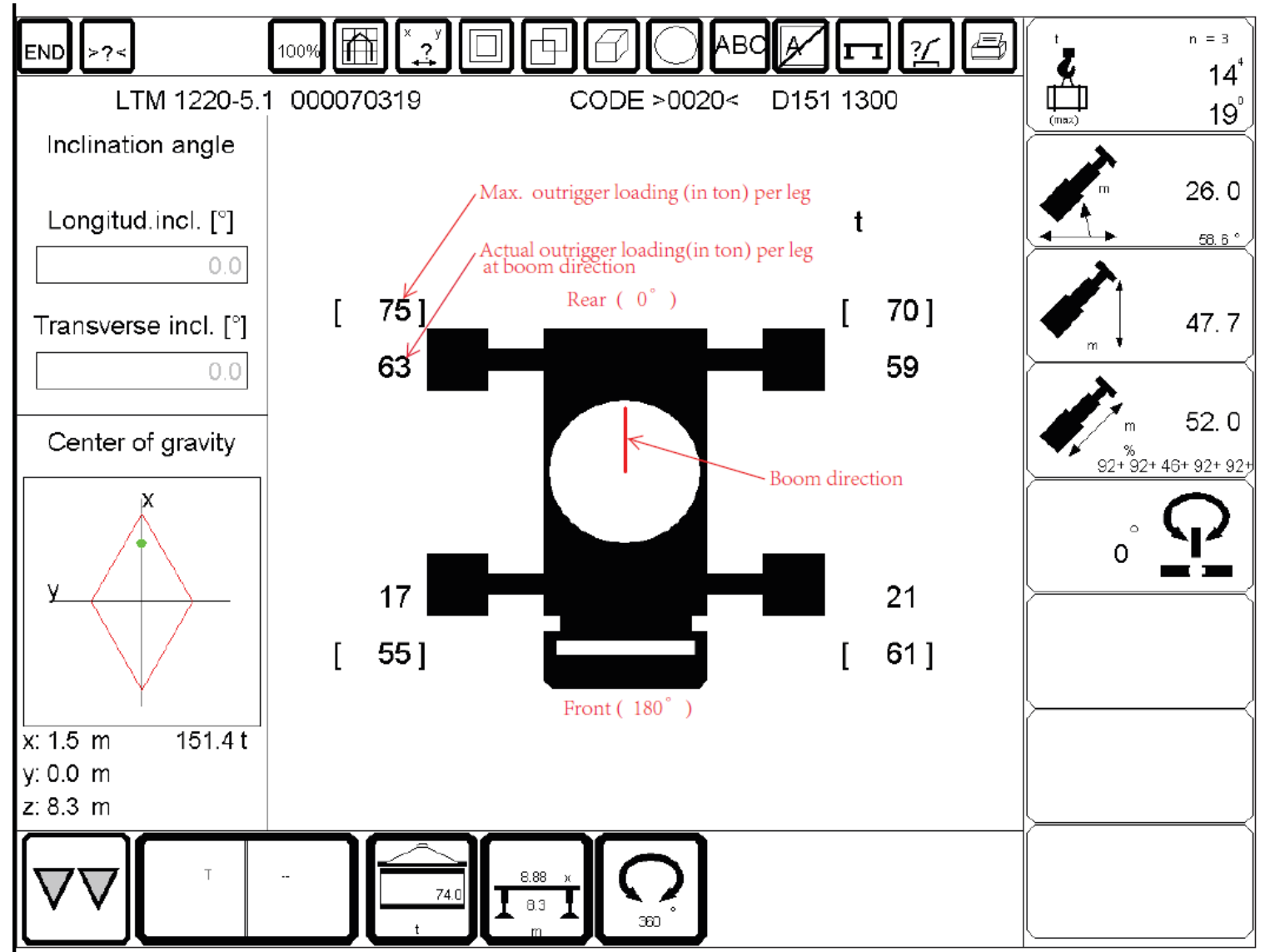
Critical lift



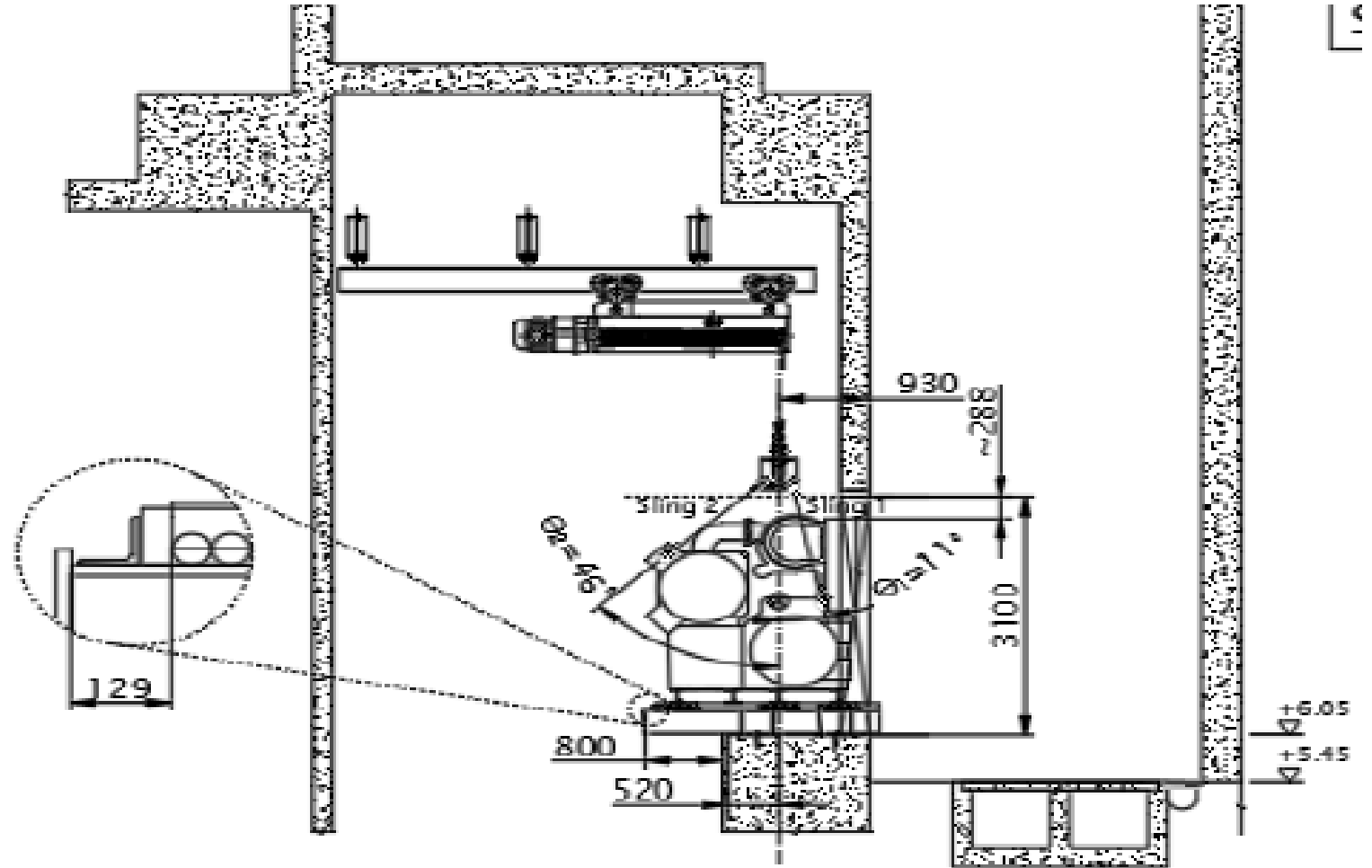
Elements of lifting plan



Ground checking is one of the aspect of lifting plan



Dimensions of
load, LG used
and the site
constraints
matter



Workshop

- Safety being integrated as part of the work routine

Work Arrangement of '11 20B' Loco + Wagon

13/Nov, 8:30

- ① Gather all relevant people on site.
- ② Safety Briefing of the work arrangement
- ③ Person in-charge: Mr. Chan ↔ Kwun Tung.
- ④ All the lifting Gear Certificates checked by MTR/Rel. parties.
→ RPE on site checking
- ⑤ Commence the lifting sequence:
 - ① wagon 929
 - ② wagon 919
 - ③ Loco 124} → Finger Pier immediately
- ⑥ 2ND Train Consist:
 - ④ wagon FW 3553
 - ⑤ wagon FW 3551
 - ⑥ wagon FW 3552 — ?} → Finger Pier.

Method Statement / Pre work briefing

- 3W1H



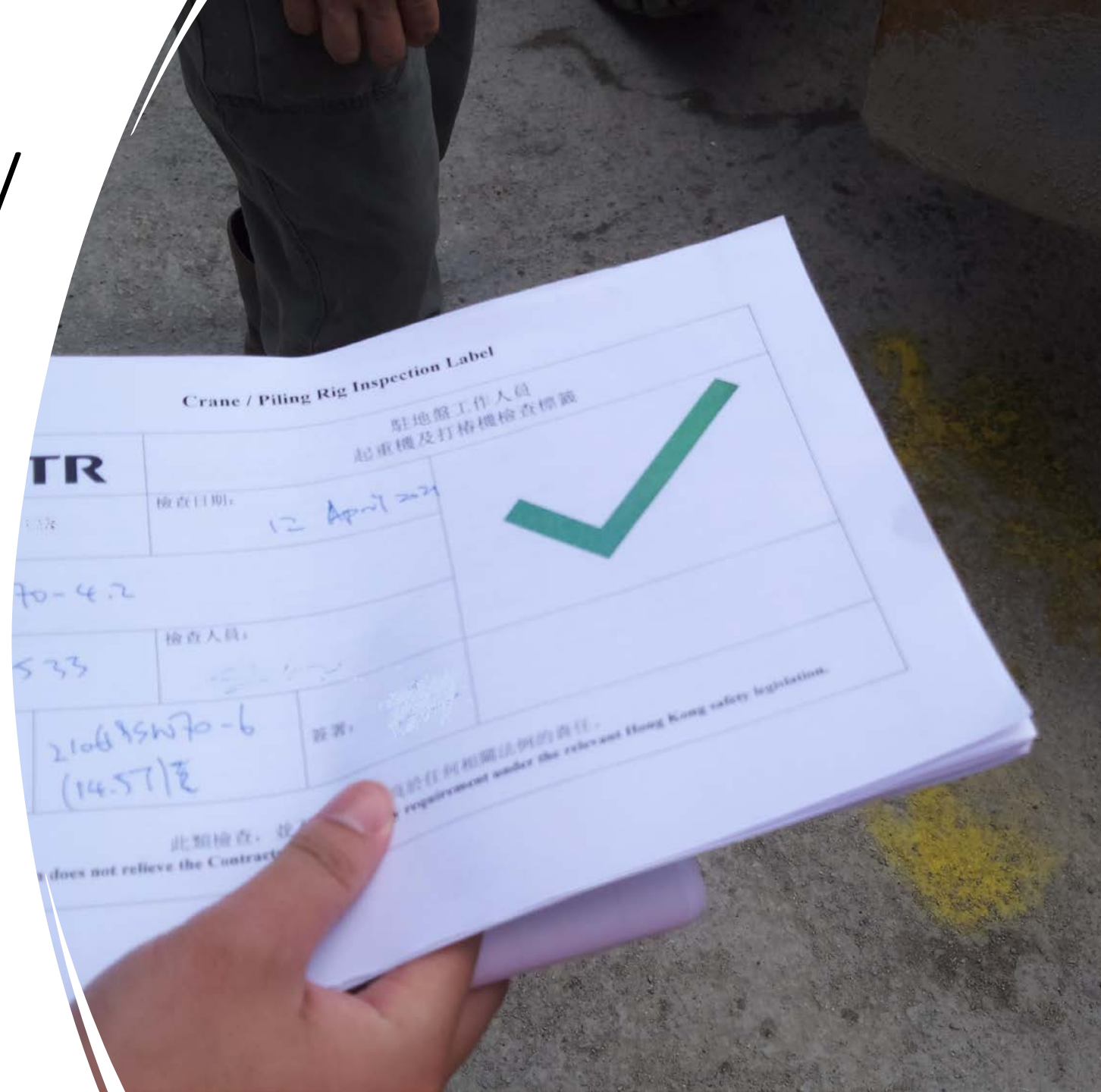
SHOT ON MI 6
DUAL CAMERA

Checking of lifting gear on spot

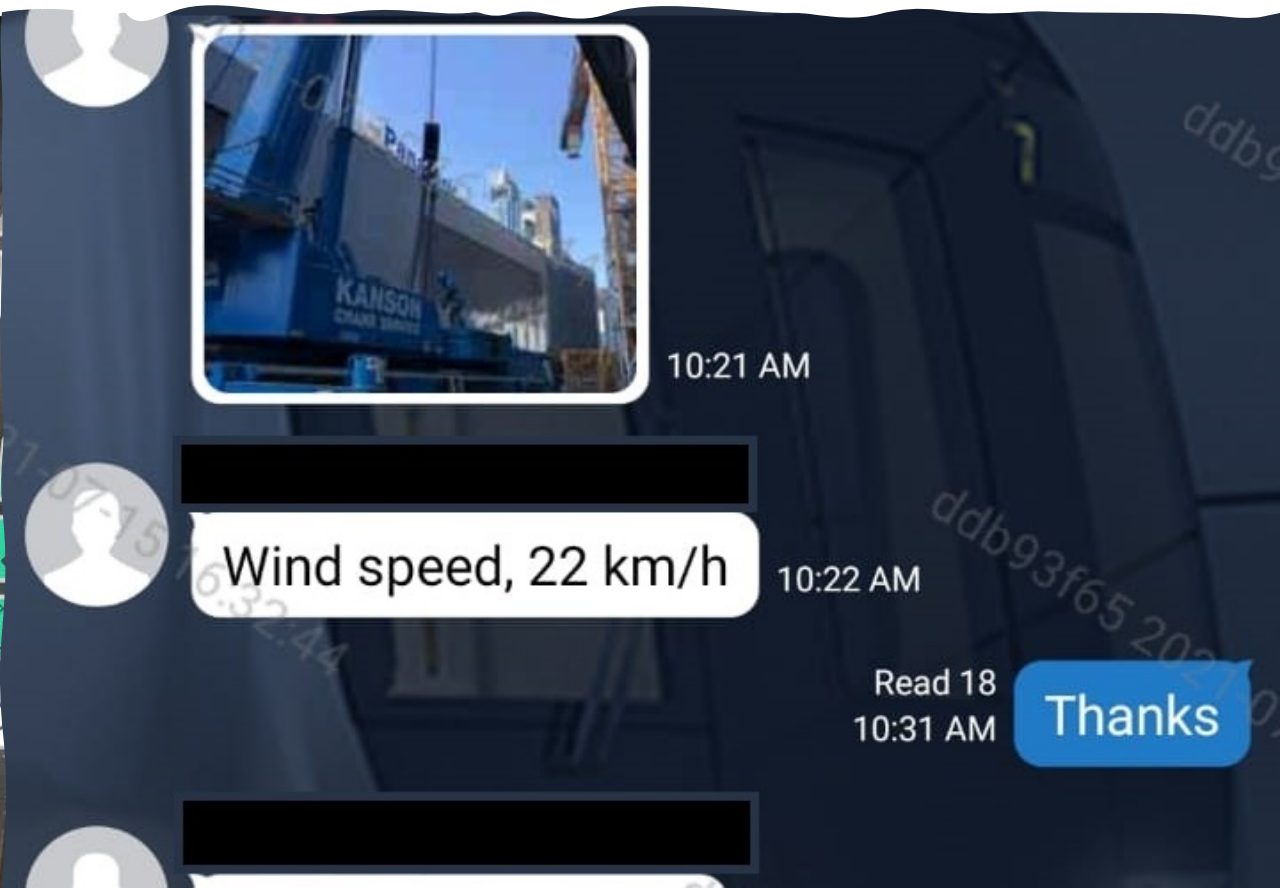
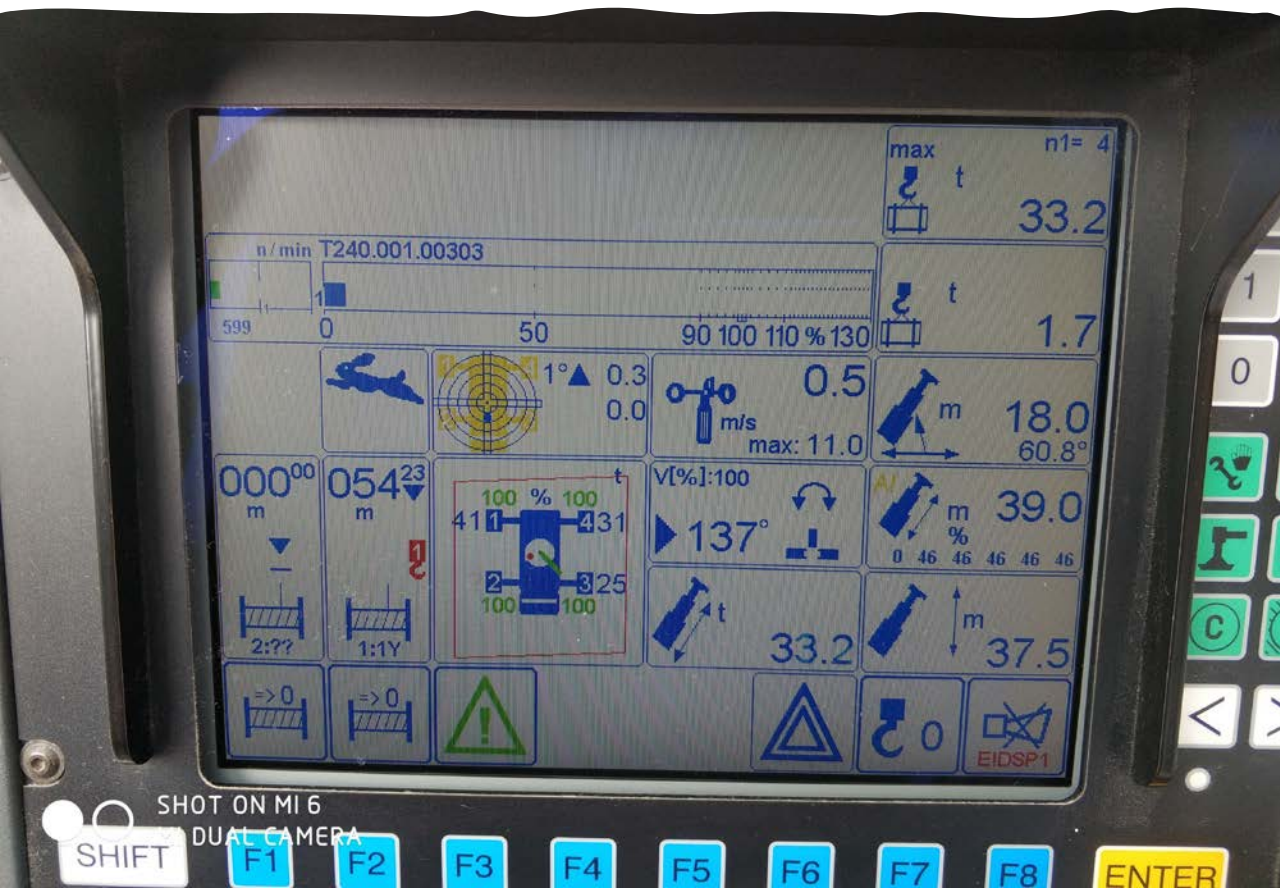


Permit to operate/ Green Tick

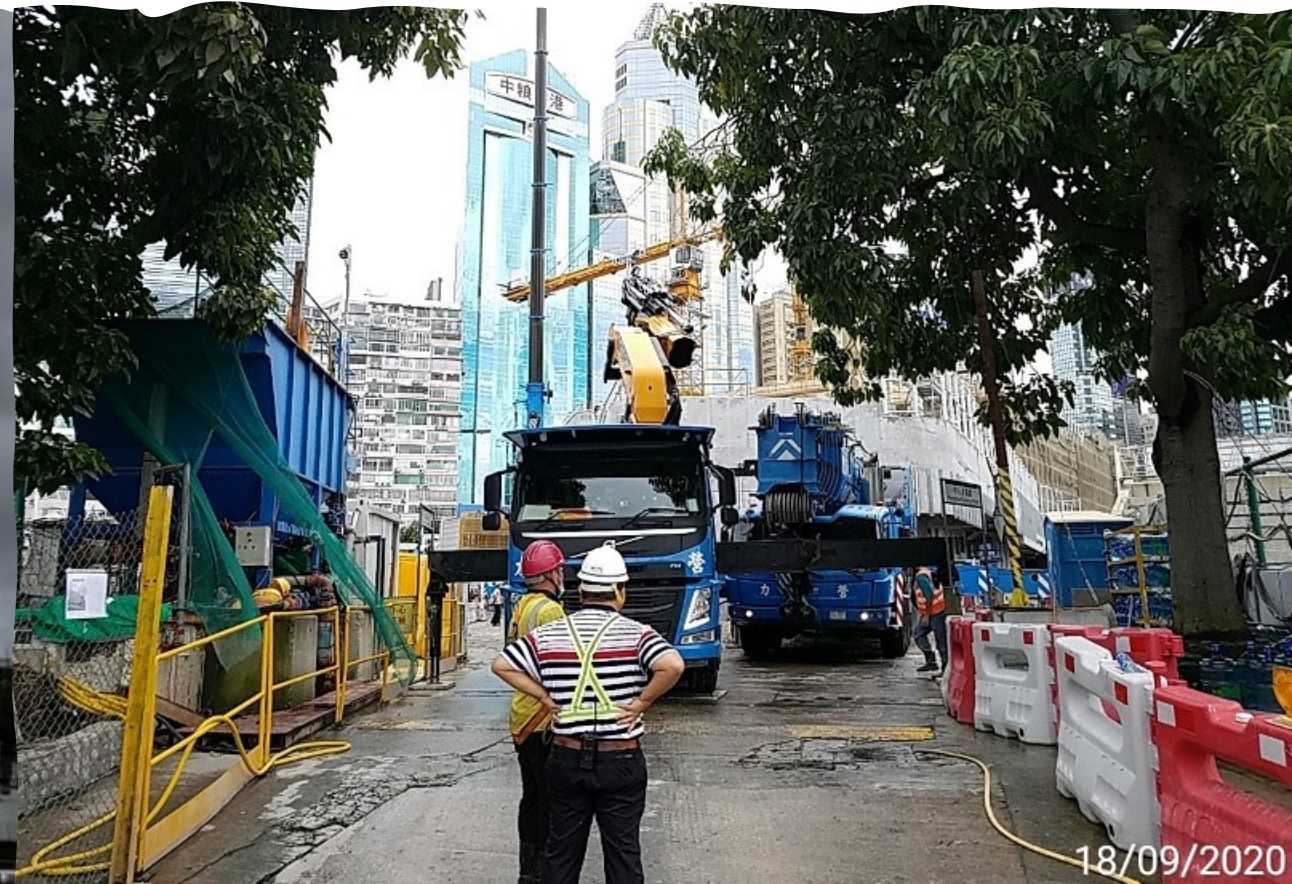
- Tools to confirm
 - the lifting arrangement and
 - functioning of critical parts/components



Wind speed verification



CP to attend the tandem lift



Our Strategies

Lifting Plan

Early engagement

Site verification

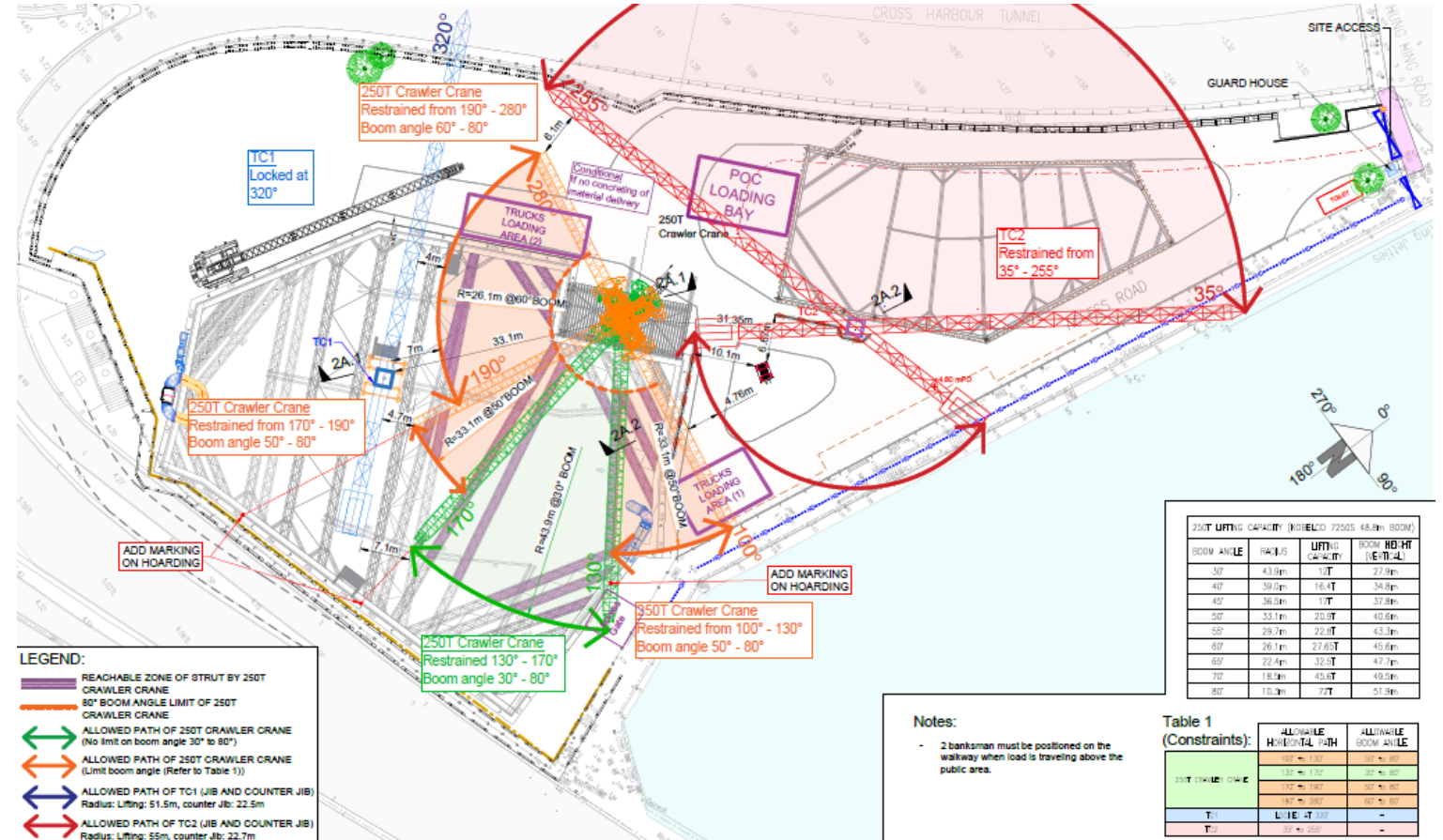
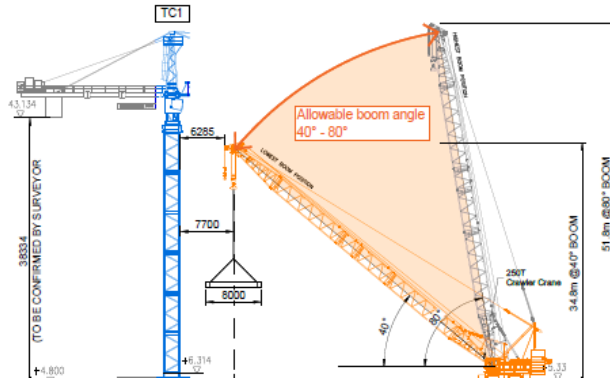


Ordinary lift

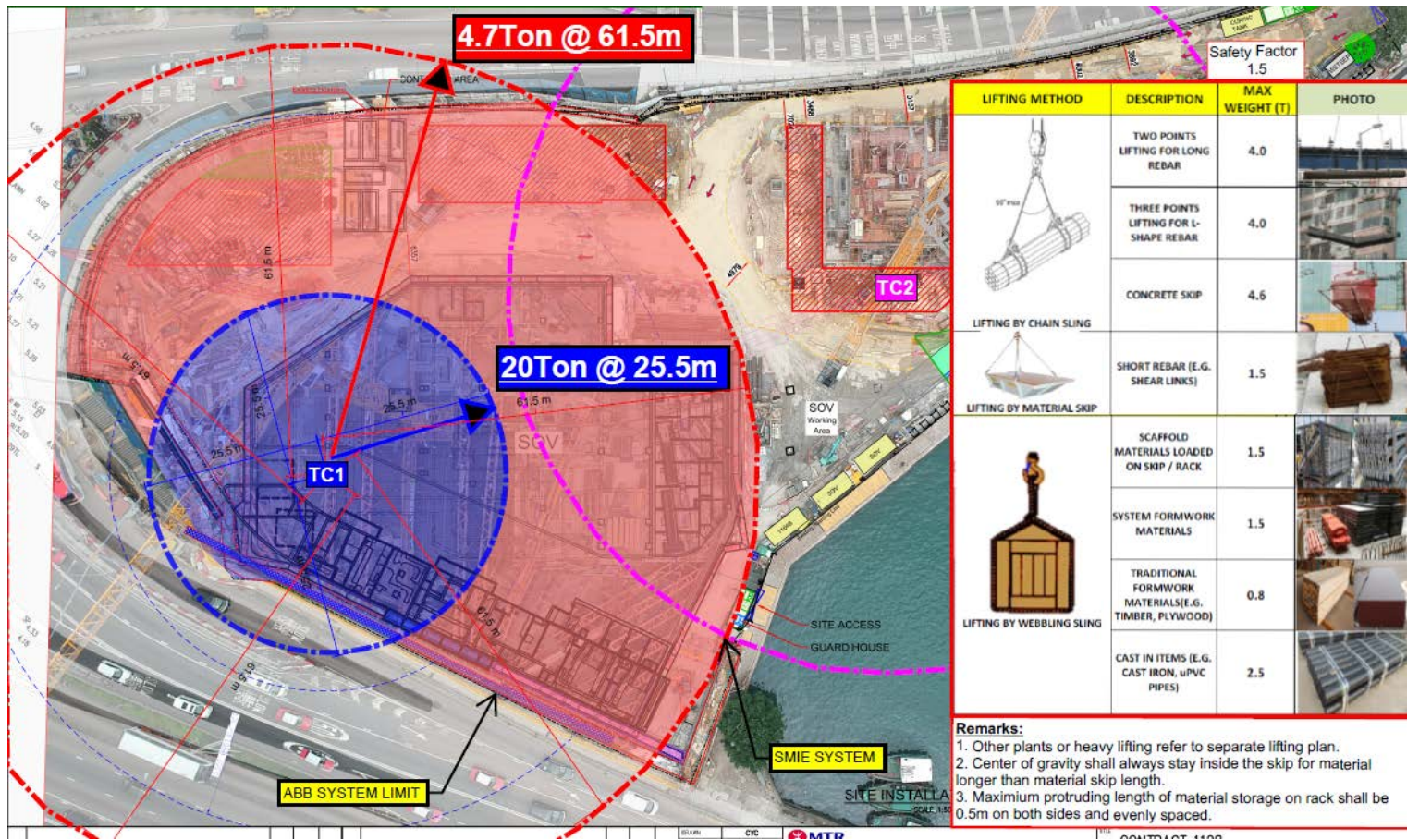


Ordinary?

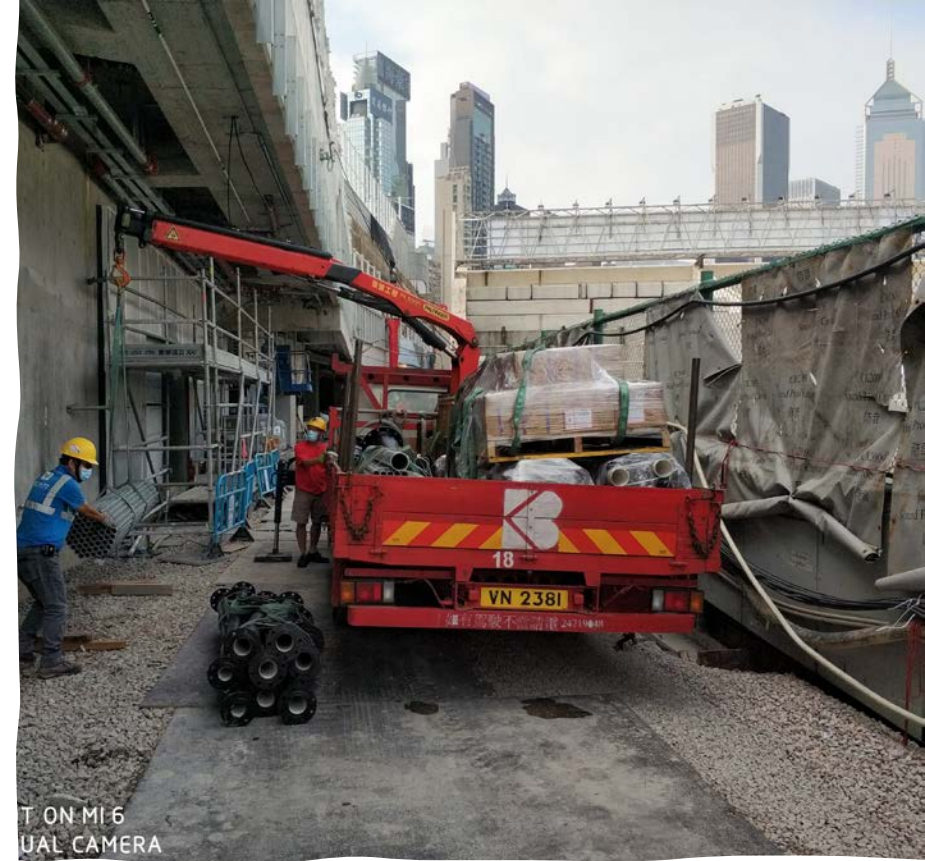
Cranes interface



Schedule of common lift



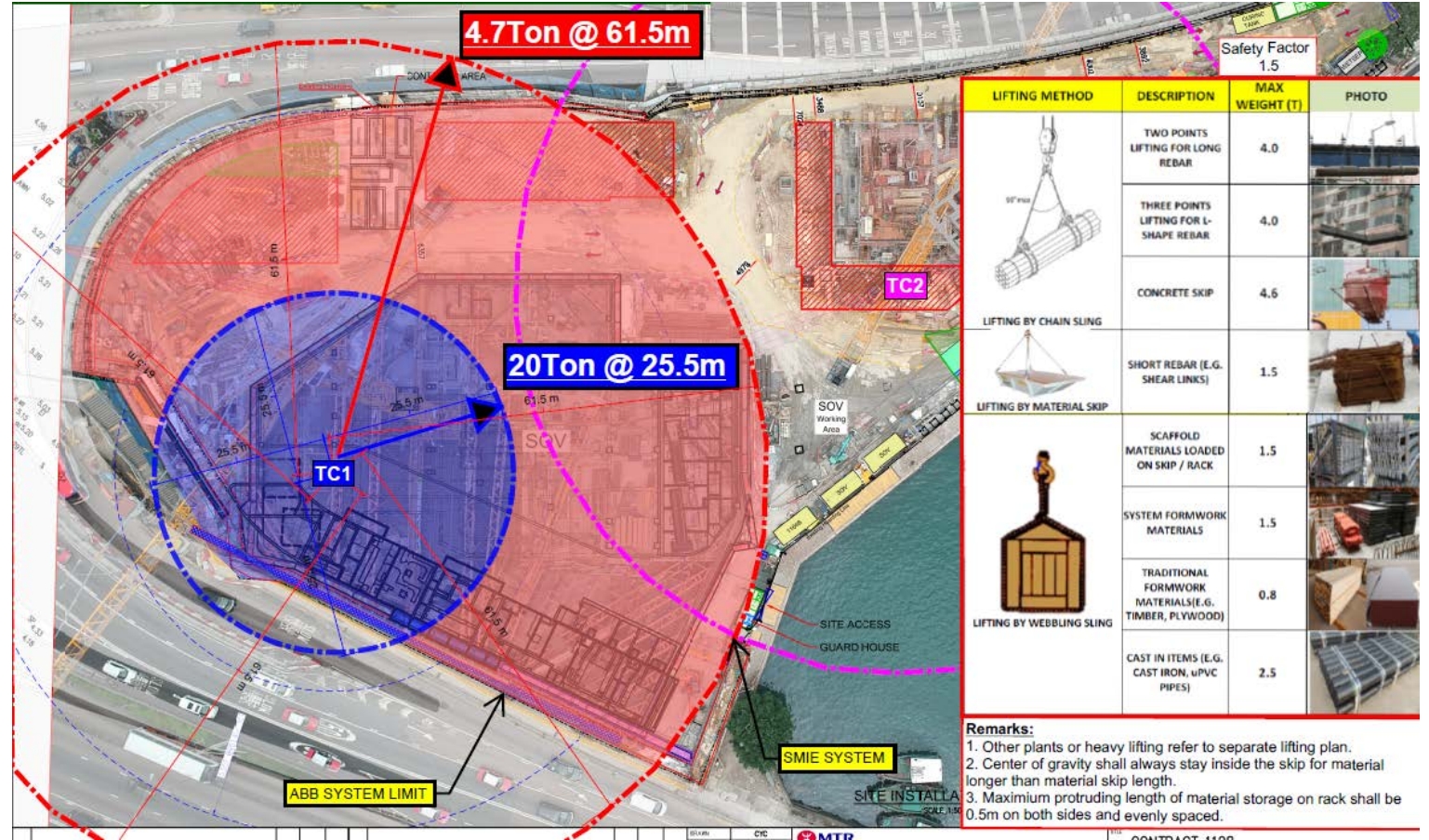
Controls of
ordinary lifts
are equally
challenging



What are the problems/causes?

Unsafe act by operator?

Lifting by operator who is accountable



What are the
problems/causes?

Planning?

Unsafe act by operator?

If a crane is
hired with
site limitation
considered



What are the problems/causes?

Planning?

Information?

Unsafe act by operator?



Attend the first lift and
Set the standard

Set standard

安全吊運 3.3.3 Safe Lifting सुरक्षित तरिकाले सामान उठाउने तरिका

與物料保持 3米 距離

Keep 3m away from materials being lifted

उठाउँदै गरेको सामान भन्दा कम्तिमा मिटरको दुरीमा बस्नुहोस्

把物料升起離地 30厘米

Lift up materials 30cm from ground

सामानलाई जमिनबाट ३० सेमी माथि उठाउनुहोस्

等候 3秒

Wait for 3s

३ वटा "स" कायम भयो भएन हेर्नुहोस्



What are the problems/causes?

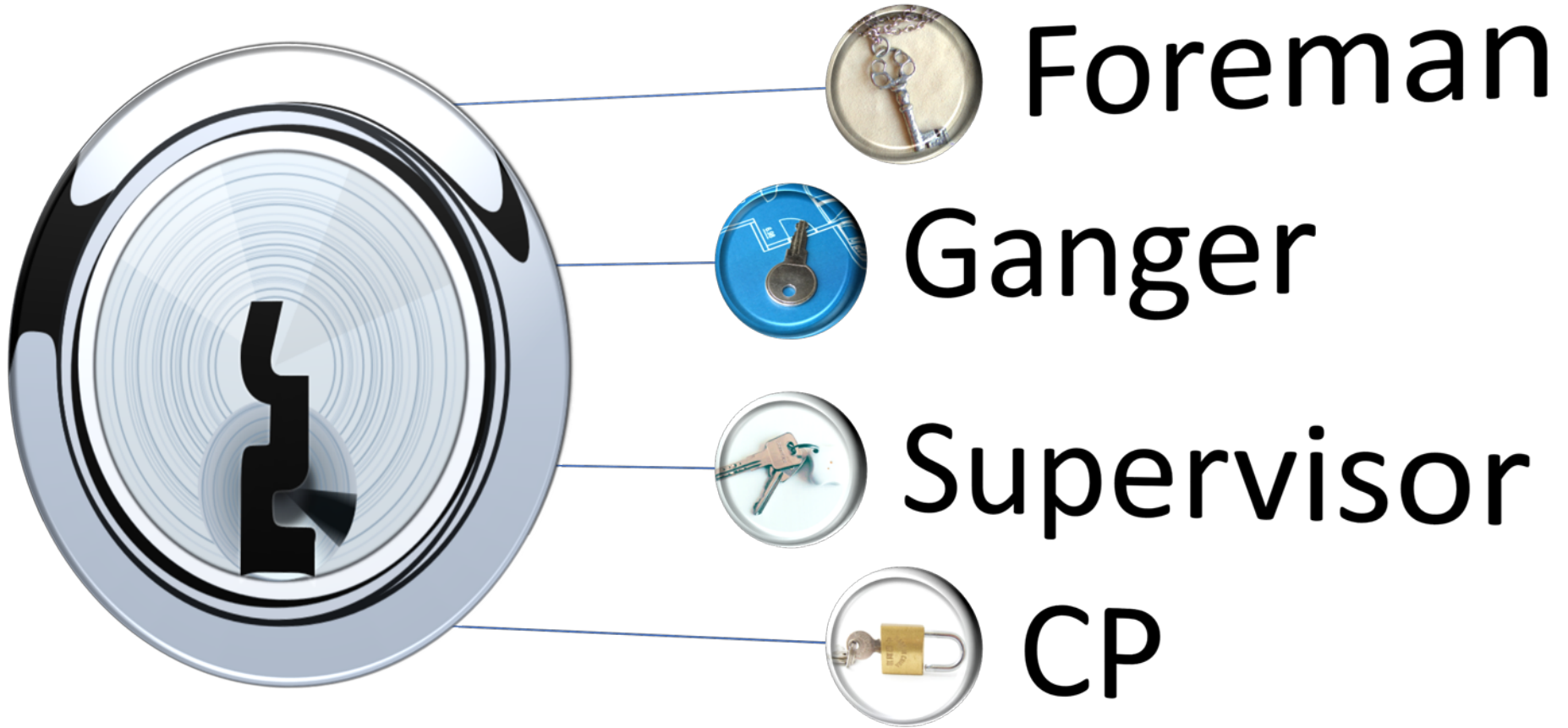
Planning?

Information?

Supervision

Unsafe act by operator?

Who is the "real guy"?



Our Strategies

Ordinary lift including day to day delivery deserves equal attention as critical lift

Right information to the right people at the right time

The FIRST safe start

WE have a role to
play

